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SOURCE Documentary as indicated. (Information specifically requested.)

RECENTLY PUBLISHED RESEARCH OF THE
NOSCOV AGRICULTURAL ACADEMY, USSR

"Chemistry of Fixation of Atmospheric Nitrogen by Azotobacter. Influence of Narcotics (Ethylurethan and Diphenylurea) on Productivity of Nitrogen Fixation," M. V. Fedorov, Moscow Agr. Acad.

"Mikrobiologiya" Vol 15, No 1, 1946, pp 23-9

On the basis of experiments with *Asotobacter agilis*, it was shown that a low concentration of ethylurea then does not affect N fixation, while higher concentrations (0,1 and 0,3 M) have a definite hindering action, with complete cessation of fixation at 0,3 M concentration. Diphenylurea begins to show inhibiting effect at a 0,0005 M concentration. Hindering action appears to be connected with blocking of the active bacterial surface concerned with N fixation. It was calculated that this area is about 2,500 sq μ per mg fixed N. It also appears that this surface is reactive only once, i. e., it does not appear to have true catalytic behavior of an enzyme.

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